10-30-02 E08 1616 $13

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	DELACK, Elaine A.	)	
		)	Examiner: Pryor, A.
Serial No.:	09/887,832	)	
		)	Art Unit: 1616
Filing Date:	06/21/01	)	
		)	Docket No. P0136
For:	METHOD FOR TREATMENT OF MULTIPLE SCLEROSIS AND RELATED NEURODEGENERATIVE DISEASES	)	

RESPONSE TO OFFICE ACTION

Commissioner of Patents and Trademarks
U.S. Patent and Trademark Office
Washington, D.C. 20231

Sir:

This is in response to an Office Action dated 26 July 2002. A response is due 28 October 2002, 26 October having fallen on a Saturday. It is believed that no fee is presently due to maintain this application in full force and effect, but if any such fee is due, please charge this to Deposit Account No. 08-1254.

AMENDMENTS

IN THE CLAIMS:

Please substitute the attached amended claims 18 and 21 for the prior claims of the same number.

REPLACEMENT CLAIMS

18. (amended) A method for therapeutic treatment of neurodegenerative conditions and effects of aging, including autoimmune conditions and fibromyalgia, said method comprising the steps of:

administering to a patient on an ongoing basis a compound effective for increasing neuronal metabolism of histamine to a histamine H_2 agonist, in an amount sufficient that said histamine H_2 agonist is produced in an amount adequate to stimulate and sustain production of cyclic AMP at a level which maintains myelin against undergoing self-degeneration;

the step of administering said compound comprising administering monoamine oxidase-A to said patient so as to increase neuronal metabolism of tele-methylhistamine to an H_2 agonist.

21. (amended) A method for therapeutic treatment of neurodegenerative conditions and effects of aging, including autoimmune conditions and fibromyalgia, said method comprising the steps of:

administering to a patient on an ongoing basis a compound effective for increasing neuronal metabolism of histamine to a histamine H_2 agonist, in an amount sufficient that said histamine H_2 agonist is produced in an amount adequate to stimulate and sustain production of cyclic AMP at a level which maintains myelin against undergoing self-degeneration;

the step of administering said compound comprising administering a monoamine oxidase-A agonist to said patient so as to increase neuronal metabolism of tele-methylhistamine to an H_2 agonist.

VERSION OF CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

18. (amended) A method for therapeutic treatment of neurodegenerative conditions and effects of aging, including autoimmune conditions and fibromyalgia, said method comprising the steps of:

administering to a patient on an ongoing basis a compound effective for increasing neuronal metabolism of histamine to a histamine H_2 agonist, in an amount sufficient that said histamine H_2 agonist is produced in an amount adequate to stimulate and sustain production of cyclic AMP at a level which maintains myelin against undergoing self-degeneration;

the step of administering said compound comprising administering monoamine oxidase-A to said patient so as to increase neuronal metabolism of tele-methylhistamine to an H_2 agonist.

21. (amended) A method for therapeutic treatment of neurodegenerative conditions and effects of aging, including autoimmune conditions and fibromyalgia, said method comprising the steps of:

administering to a patient on an ongoing basis a compound effective for increasing neuronal metabolism of histamine to a histamine H_2 agonist, in an amount sufficient that said histamine H_2 agonist is produced in an amount adequate to stimulate and sustain production of cyclic AMP at a level which maintains myelin against undergoing self-degeneration;

the step of administering said compound comprising administering a monoamine oxidase-A agonist to said patient so as to increase neuronal metabolism of tele-methylhistamine to an H_2 agonist.

REMARKS

The Office Action contained two rejections of the claims under 35 USC §102(b) and one rejection of the claims under 35 USC §103(a). Each will be responded to below.

Applicant's remarks are based on review of the copies of the references that were supplied with the Office Action, i.e., the abstracts of the Soviet patent and the symposium paper. Copies of the complete patent and paper were not included in the Office Action, consequently Applicant has not been able to consider the full text of these documents.

a. Response to §102 Rejections

Claims 18 and 21-23 were rejected under 35 USC §102(b) as being anticipated by Bykova et al (SU 1,640,653). Claims 18 and 21-23 were also rejected as being anticipated by Greenberg et al (Recent Adv. Pharmacol. Adrenoreceptors, Proc. Satell. Syn. Int. Congr. Pharmacol. 7th (1978, 24-50)). Applicant respectfully traverses both rejections.

With regard to Bykova, the reference does not show a method for treatment of neurodegenerative conditions, as is required by Applicant's claims. Instead, Bykova teaches a method for diagnosing multiple sclerosis. Samples of blood are collected before and after administering a small amount of reserpine, and are combined with a suspension of sheep's erythrocytes. Bykova states that an increase in the number of immune rosettes of blood lymphocytes is observed in healthy patients after administering the reserpine solution, while patients having multiple sclerosis show no difference.

Consequently, the method taught by Bykoba is a one-time, diagnostic technique, not a method for treatment of a condition as in the present invention. In order to clarify this distinction, Applicant has amended the claims to recite that the compound is administered on an ongoing basis (i.e., continuously or intermittently), so as to both stimulate and sustain production of cAMP at the increased level.

Moreover, Bykova does not show administering the monoamine oxidase-A or monoamine oxidase-A agonist "in an amount sufficient that said histamine H_2 agonist is produced in an amount adequate to stimulate and sustain production of cyclic AMP at a level which maintains myelin against undergoing self-degeneration, as is also required by Applicant's

claims". Even if Bykova's single dose of reserpine solution may have a transitory effect on the production of cAMP, it is not inherent in Bykova that production of cAMP would be sustained at the level necessary to maintain myelin against undergoing self-degeneration; to the contrary, cAMP production would immediately revert to the prior condition rather than being sustained at the necessary level.

Greenberg likewise fails to teach the limitations of Applicant's claims. First, Greenberg does not disclose a method of therapeutic treatment. The reference merely compares the actions of reserpine, desmethylimipramine and trifluoperazine on beta-adranergic receptor density in rat brains, and concludes that the different effects indicate that the theories regarding the mechanisms of these compounds need reevaluation, and that this might lead to a better explanation of their actions and the reasons for "development of tolerance to certain of their effects." No actual therapeutic method is disclosed or suggested.

Furthermore, as with the Bykova reference, Greenberg does not teach administering a compound in an amount sufficient to sustain production of cAMP at a level that maintains the myelin against undergoing self-degeneration, nor is it inherent that such levels would be produced and sustained; in fact, the Greenberg reference discloses no dosage rates or ranges for the three compounds.

Finally, regarding claim 18, it should be noted that this claim is limited to administration of "monoamine oxidase-A", not reserpine or a monoamine oxidase A agonist. Neither reference shows any use of monoamine oxidase-A.

In order to anticipate a claim, the reference must teach every element of a claim (MPEP 2131). For the reasons discussed above, both Bykova and Greenberg fail to teach either (1) a method for therapeutic treatment of neurodegenerative conditions and effects, or (2) administering reserpine or another monoamine oxidase-A agonist on an ongoing basis in an amount sufficient that production of cAMP is sustained at a level necessary to prevent the myelin from undergoing self-degeneration, both of which are required by Applicant's claims. The references therefore fail to anticipate the claims, and Applicant respectfully requests that the rejection of the claims under 35 USC §102(b) be reconsidered and withdrawn.

b. Response to §103 Rejection

Claim 24 was rejected under 35 USC §103(a) over either Greenberg or Bykova. It was asserted that Greenberg or Bykova "teaches all that is recited in claim 24 except for the instant amount of reserpine. However, one having ordinary skill in the art would have been expected to determine the optimal amount of reserpine through routine experimentation. One would have been motivated to do this in order to effectively treat multiple sclerosis or aging."

Applicant respectfully traverses this rejection as well. In order to establish a *prima facie* case of obviousness, the prior art reference must teach or suggest all of the claim limitations (MPEP 2143). As has been explained above, neither reference teaches a method for therapeutic treatment of a neurodegenerative condition, as is required by Applicant's claims, nor do they teach administering the specified compound on an ongoing basis in an amount sufficient that production of cAMP is sustained at a level which maintains the myelin against undergoing self-degeneration.

Furthermore, the references provide no motivation for experimenting to reach the range recited in Applicant's claim 24. In the Office Action it was stated that one would have been motivated to do this in order to effectively treat multiple sclerosis or aging However, as noted above, the references do not disclose any therapeutic treatment at all, therefore they can provide no motivation for experimenting in order to find a range in which such a treatment is effective. Applicant's invention is directed to such a treatment, however, the motivation for modifying the references must be found within the prior art itself and not in Applicant's specification (MPEP 2143).

Accordingly, Applicant respectfully submits that the references do not show all of the elements of Applicant's claim 24, nor do they provide motivation for modifying the references to meet the requirements of claim 24. Applicant therefore submits that a *prima facie* case of obviousness has not been established, and respectfully requests that the rejection of claim 24 under 35 USC §103(a) be reconsidered and withdrawn.

c. Conclusion

Applicant respectfully requests reconsideration of the present application in view of the amendments and remarks set forth herein. It is believed that the above-referenced claims are now in condition for allowance. If there is any matter that can be expedited by consultation with

Applicant's attorney, such would be welcome. Applicant's attorney can normally be reached at the telephone number given below.

Signed at Bellingham, County of Whatcom, State of Washington this 28th day of October 2002.

Respectfully submitted,

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EXPRESS MAIL CERTIFICATE

"Express Mail" label number: EV114668234US

Date of Deposit: 28 October 2002

I hereby certify that the following attached papers: a RESPONSE TO OFFICE ACTION and a RETURN RECEIPT POSTCARD are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, U.S. Patent and Trademark Office, Washington, D.C. 20231.

Signed: _____
Dale Y Perez, Legal Assistant